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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,233

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Willi-Kurt Gries

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01/28/2009

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EXAMINER

EOFF, ANCA

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,233	Applicant(s) GRIES ET AL.	
	Examiner ANCA EOFF	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/07/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 and 3-33 are pending in the application. Claim 2 has been canceled.
2. The foreign priority document EP 03103498.6 filed on September 22, 2003 was received and acknowledged.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-5, 9, 11, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo et al. (US Pg-Pub 2003/0143487).

With regard to claim 1, Kondo et al. disclose a lithographic printing plate comprising:

- a photosensitive layer comprising an ethylenically unsaturated compound, a polymeric binder and a polymerization initiator (par.0056), and
- a protective layer applied onto the photosensitive layer for eliminating the polymerization-inhibitory effect of oxygen in the air (par.0099).

Kondo et al. further disclose that the photoinitiator may be a system comprising a hexaarylbiimidazole radical generator and a dye (par.0069), wherein the hexaarylbiimidazole radical generator is equivalent to the photoinitiator and the dye is equivalent to the sensitizer of the instant application.

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Kondo et al. further disclose that the protective layer may comprise polyvinyl alcohols, such as:

- PVA-203, PVA-217, PVA -220 and PVA-224 with a degree of saponification between 87-89%, and

- PVA-205 with degree of saponification between 86.5-89%, as evidenced in the Kuraray Product Catalog on Polyvinyl Alcohol submitted by the applicant on November 07, 2008.

Kondo et al. further disclose that the protective layer may comprise polyvinyl pyrrolidone (par.0099).

While Kondo et al. do not specifically disclose a printing plate comprising the above-mentioned elements, it would have been obvious to one of ordinary skill in the art at the time of the invention to obtain such a printing plate, all the components being clearly disclosed by Kondo et al.

With regard to claims 3 and 15, Kondo et al. further disclose that the polymeric binder contains monomeric units of methacrylic acid (see examples of binders B2-B4 in par.0150-0152).

With regard to claim 4, Kondo et al. disclose that the ethylenically unsaturated compounds may be selected from the group consisting of compounds comprising at least one, preferably two or more terminal ethylenically unsaturated bonds and mixtures thereof (par.0057). The compounds with two or more terminal ethylenically unsaturated bonds may be polyfunctional (meth)acrylates (par.0058) and are equivalent to the polyfunctional (meth)acrylates used as crosslinking agent of the instant application.

With regard to claims 5 and 20, Kondo et al. further disclose that the ethylenically unsaturated compound may be a vinylurethane compound (par.0065).

With regard to claim 9, Kondo et al. further disclose that the printing plate may be exposed to active light with a wavelength between 350-600 nm and then developed (par.0132) with a developer comprising an inorganic alkali salt (par.0117).

With regard to claim 11, Kondo et al. disclose that the exposure may be performed with light with $100\mu\text{J}/\text{cm}^2$ of FD-YAG laser (par.0145).

5. Claim 6 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo et al. (US Pg-Pub 2003/0143487) in view of Alles (US Patent 3,458,311)

With regard to claim 6, Kondo et al. teach the printing plate of claims 1 and 20 (see paragraph 4 above) but fail to disclose that the photosensitive layer may comprise a radical chain transfer agent.

However, such additive is well-known as being present in photopolymerizable compositions for printing plates, as evidenced by Alles in column 13, lines 8-11.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use chain transfer agents in the photopolymerizable / photosensitive composition of Kondo et al., with a reasonable expectation of success.

6. Claims 7-8, 10, 12-14, 16-19, 21-24 and 26-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo et al. (US Pg-Pub 2003/0143487) in view of Lang et al. (US Patent 5,234,790).

With regard to claim 7, Kondo et al. teach the printing plate of claim 1 (see paragraph above), wherein the photoinitiator may be a system comprising a hexaarylbiimidazole radical generator and a dye (par.0069) but fail to disclose that the photosensitive layer may comprise an optical brightening agent.

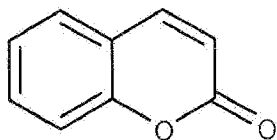
Lang et al. disclose a photosensitive element used for image reproduction (column 1, lines 11-12), wherein the photosensitive element comprises a photohardenable/photopolymerizable layer containing a polymeric binder, an addition polymerizable ethylenically unsaturated monomer and an initiator system (column 5, lines 62-66).

The initiator system may comprise a hexaarylbisimidazole and 7-diethylamino-4-methylcoumarin as sensitizer (column 6, lines 60-66).

As Kondo et al. teaches the use of the initiator system comprising a hexaarylbiimidazole radical generator and a dye, it would have been obvious to one of ordinary skill in the art to use the system comprising hexaarylbisimidazole and 7-diethylamino-4-methylcoumarin as sensitizer, as disclosed by Lang et al., in the photopolymerizable/photosensitive composition of Kondo et al.

The 7-diethylamino-4-methylcoumarin is equivalent to the optical brightening agent of formula:

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of claim 8 of the instant application having one ring substituted by a methyl group and the other ring substituted by a diethylamino group (as shown on page 14, line 15 of the specification of the instant application).

With regard to claim 10, Kondo et al. further disclose that the printing plate may be exposed to active light with a wavelength between 350-600 nm and then developed (par.0132) with a developer comprising an inorganic alkali salt (par.0117).

With regard to claim 12, Kondo et al. disclose that the exposure may be performed with light with $100\mu\text{J}/\text{cm}^2$ of FD-YAG laser (par.0145).

With regard to claims 13-14, Lang et al. disclose that the coumarin dye sensitizers are present in a photohardenable/phopolymerizable composition in an amount of 2.5 by weight (see Table 1 in column 16, lines 10-20, wherein Tinopal SFG is a coumarin dye sensitizer).

With regard to claims 16-19, Kondo et al. disclose that the ethylenically unsaturated compounds may be selected from the group consisting of compounds comprising at least one, preferably two or more terminal ethylenically unsaturated bonds and mixtures thereof (par.0057). The compounds with two or more terminal ethylenically unsaturated bonds may be polyfunctional (meth)acrylates (par.0058) and are equivalent to the polyfunctional (meth)acrylates used as crosslinking agent of the instant application.

With regard to claims 21-24, Kondo et al. further disclose that the ethylenically unsaturated compound may be a vinylurethane compound (par.0065).

With regard to claims 26-29, Lang et al. teach that chain transfer agents, such as 2-mercaptobenzoxazole (2-MBO) may be used in photohardenable/phopolymerizable composition comprising hexaarybisimidazole (HABI) initiators (see Table 1 in column 16, lines 10-20).

With regard to claims 30-33, Kondo et al. disclose that the printing plate may be exposed to active light with a wavelength between 350-600 nm and the developed (par.0132) with a developer comprising an inorganic salt is used for development (par.0117).

The exposure may be performed with light with $100\mu\text{J}/\text{cm}^2$ of FD-YAG laser (par.0145).

Response to Arguments

7. Applicant's arguments with respect to claims 1 and 3-33, filed on November 07, 2008 have been considered but are moot in view of the new grounds of rejection.

On page 10 of the Remarks, the applicant shows that Kondo et al. (US Pg-Pub 2003/0143487) fail to disclose the saponification degree of polyvinylalcohols between 80 and 92.9 mol% as in the amended claim 1.

The examiner considered the applicant's arguments. However, upon reconsideration, new grounds of rejection for the amended claims are shown above in paragraphs 3-6 of the Office Action.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANCA EOFF whose telephone number is (571)272-9810. The examiner can normally be reached on Monday-Friday, 6:30 AM-4:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. E./

Examiner, Art Unit 1795

/Cynthia H Kelly/

Supervisory Patent Examiner, Art Unit 1795